

# CMAP FY 2016-2020 CMAQ PROJECT APPLICATION

## TRANSIT PROJECTS

<b>I. PROJECT IDENTIFICATION</b>					
Project Sponsor Illinois Department of Transportation (IDOT)			Contact Information – Name, Title, Agency, Address, Phone, e-mail (e-mail required)		
Other Agencies Participating In Project Pace Suburban Bus Service Regional Transportation Authority (RTA)			John Fortmann Region 1 Engineer Illinois Department of Transportation 201 West Center Court Schaumburg, IL 60196-1096		
<input checked="" type="checkbox"/> New Project	<input type="checkbox"/> New Project				
<input type="checkbox"/> Existing CMAQ Project	<input type="checkbox"/> Existing CMAQ Project				
<input type="checkbox"/> Add CMAQ to Existing Project	<input type="checkbox"/> Add CMAQ to Existing Project				
<b>II. PROJECT LOCATION</b> <ul style="list-style-type: none"> <li>Projects not readily identified by location must provide a title on the last line of this section</li> <li>Attach a map sufficient to accurately locate this project in a GIS system</li> </ul>					
Name Of Street Or Facility To Be Improved Edens Expressway (Interstate 94/U.S. Route 41)			Marked Route # Interstate 94 (I-94) U.S. Route 41 (US 41)		
Project Limits: North Reference Point/Cross St/Intersection Lake Cook Road			Marked Route #	Municipality & County Cook	
Project Limits: South Reference Point/Cross St/Intersection West Foster Avenue			Marked Route #	Municipality & County Cook	
Other Project Location Information Or Project Title Edens Expressway – Bus on Shoulder					
<b>III. PROJECT FINANCING &amp; CMAQ FUNDING REQUEST</b> <span style="float: right;">Please review the <a href="#">instructions</a>.</span>					
	Starting Federal Fiscal Year*	Total Phase Costs	(New) CMAQ Funds Requested	Other Federal Funds Including prior CMAQ awards	
				Fund Type	Fund Type
Engineering Phase 1		<b>\$159,021</b>	\$		\$
Engineering Phase 2	2016	<b>\$1,207,424</b>	\$		\$
Right-Of-Way Acquisition		\$	\$		\$
Construction (Including Construction Engineering)	2017	<b>\$ 9,874,300</b>	<b>\$ 7,899,440</b>		\$
Engineering (For Implementation Projects)		\$	\$		\$
Implementation	2017	<b>\$2,615,944</b>	<b>\$2,092,755</b>		\$
Alternatives Analysis		\$	\$		\$
*Phase must be accomplished within 3 years		<b>\$ 13,856,689</b>	<b>\$ 9,992,195</b>		
Total Project Costs					
Source Of Local Matching Funds		State Funds Indicate if sponsor intends to apply for Transportation Development Credits.			
If Soft Matching Funds Are Intended To Be Used, Please Contact CMAP Staff.					
Have the Matching Funds Been Secured? (Provide Details):		Matching funds will be provided by the Illinois Legislative Appropriation for roadways on an annual basis.			

# CMAQ FY 2016-2020 CMAQ PROJECT APPLICATION

## TRANSIT PROJECTS – PAGE 2

### IV. PROJECT EMISSIONS BENEFIT DATA

Project Type (Check One): ☒ Facility Improvement ☐ Service And Equipment ☐ Access to Transit

Auto Trips Eliminated Per Day (Round Trips): 700

Length Of Auto Trips Eliminated (One-Way Miles To The Nearest Tenth): 14.0

Auto Trips Diverted Per Day (Round Trips): N/A

Line-Haul Length Of Diverted Trips (One-Way Miles To The Nearest Tenth): N/A

Project Life (Years): 5

Provide basis for parameters used to estimate benefits (e.g., new ridership, auto occupancy, trip length. See [instructions](#)):

This is the second Bus on Shoulders operation within the NE Illinois Region. As required by the Federal Highway Administration, this will be implemented as a Demonstration Project which will be conducted under specified conditions designed to ensure safe operations, similar to the current I-55 corridor Bus on Shoulder program. Benefits of using the shoulder for transit are to improve on-time performance, achieve travel time savings, improve air quality, reduce congestion, and utilize existing infrastructure in a cost effective program.

Benefits have been proven based on the performance of the current I-55 corridor Bus on Shoulder program. The I-55 service has resulted in increased on-time performance from the mid 60% level to approximately 90% within the first year of operations. In 2012, ridership on Route 755 Plainfield – UIC increased approximately 150% while ridership on Route 855 Plainfield – East Loop Express increased approximately 60%. Buses utilized the shoulder around 65% of their trips during January 2013. Regarding the I-94 Edens Corridor, Pace predicts a total daily ridership increase from 520 riders to 1823 riders after two years of BOS operations on Route 620 Yellow Line Dempster – Allstate and Route 626 Skokie Valley Limited in addition to new and restructured services.

The implementation of a Bus on Shoulder program will reduce delays within the most congested time periods which will result in ridership retention and new riders attracted to the service.

There are currently two existing Pace bus routes that utilize the Edens Expressway corridor, Route 620 and Route 626. With the implementation of the Bus on Shoulder service, Pace will be expanding the existing routes as well as implementing a new route (Route 618) that is anticipated to begin service in summer 2015. Two additional routes are planned for the Edens Expressway corridor which will provide connections from the Chicago Transit Authority (CTA) Jefferson Park Blue Line as well as the CTA Kimball Brown Line to the Lake Cook Corridor. The projected benefits associated with the implementation the proposed I-94 Bus on Shoulder program include an anticipated triple the total daily ridership (520 riders to 1823 riders) in the first two years of operation. For a detailed explanation of Pace's current service, future service restructuring, and ridership data, please refer to the attached documents.

### SERVICE IMPROVEMENTS

On-Time Performance - Route to be Improved: 20 Minutes System-Wide: N/A

Reliability Enhancements (Check All that Apply):

<b>Rail</b> <input type="checkbox"/> New Vehicles <input type="checkbox"/> Upgraded Switches <input type="checkbox"/> Upgraded Power Supply <input type="checkbox"/> Positive Train Control <input type="checkbox"/> Station Consolidation <input type="checkbox"/> Track Improvements <input type="checkbox"/> Reduction of Freight/Vehicle/Pedestrian Interference	<b>Bus</b> <input type="checkbox"/> New Vehicles <input type="checkbox"/> Queue Jump/Bypass Lanes <input type="checkbox"/> Off-board Fare Collection <input checked="" type="checkbox"/> Reduced Stops/Express Service <input type="checkbox"/> New Dispatching/Decision Support Systems <input type="checkbox"/> Passenger Vehicle Movement Restrictions	<input type="checkbox"/> Transit signal priority <input type="checkbox"/> Multi-Door Boarding with Off-board Fare Collection <input checked="" type="checkbox"/> Bus-on-Shoulders <input type="checkbox"/> Managed Lanes <input type="checkbox"/> Dedicated Bus Way <input type="checkbox"/> Far-side Stops <input type="checkbox"/> Bus Stop Upgrades <input type="checkbox"/> Near Level Boarding
---	---	--

### FACILITIES/CAPITAL IMPROVEMENTS

Existing Asset Condition (1-5 scale used by RTA):   0  

Description and Location of Service (For Equipment Purchases):  
N/A

Net Number Of New Vehicle Parking Spaces: N/A Net Number Of New Bicycle Parking Spaces: N/A

### V. PROGRAM MANAGEMENT INFORMATION

Is right-of-way acquisition required for this project? ☐ Yes ☒ No  
 If so, has right-of-way been acquired? ☐ Yes ☐ No

Engineering Status: ☐ N.A ☐ Not Begun ☒ Engineering Underway (provide details below) ☐ Engineering Completed  
Date completion is anticipated: Phase I Substantially Complete, Anticipated Approval February 2015

Estimated Completion Year/Start Of Service: 2017

## VI. PROJECT DESCRIPTION

Please describe project.

This request is to enable the implementation of a Bus on Shoulder (BOS) system on the Edens Expressway corridor. The project area is along Interstate 94 (I-94) extending from West Foster Avenue to the Edens Spur interchange, and US 41 from the Edens Spur interchange to Lake Cook Road in Cook County, a length of approximately 14 miles. The scope of work includes resurfacing, restriping, signage, and rumble strip modifications. In addition, the Illinois Department of Transportation will be responsible for maintaining the bus shoulder and keeping it safe and available for transit operations during the demonstration period which will be conducted by regular sweeping operations.

Generally known as the Edens Expressway, the route is designated as a Class I truck route, which allows the heaviest commercial trucks. There is a basic 6-lane cross section throughout the corridor with 3 lanes in each direction. The existing mainline lanes are 12 feet wide, while inside and outside shoulder widths vary throughout. Traffic volumes on the Edens Expressway range from about 130,000 annual average daily traffic (AADT) to the north, to 160,000 AADT to the south. Congestion issues are observed in both directions during the AM and PM peak hours, with the most severe observed in the eastbound direction during the PM peak hour. During this PM peak hour, traffic congestion on the eastbound direction extends from the Kennedy Expressway junction at I-90 to the Edens spur interchange near Lake Cook Road. This corridor has 10 interchanges over the 14 mile study area.

This study recommends Pace bus operations on right side (or outside) shoulders for approximately 10 miles in each direction along this corridor. Nationally, buses typically ride along the outside shoulder. The proposed limits of the Bus on Shoulder corridor extend from Foster Avenue to a point south of Dundee Road with some restrictions. The proposed highway improvements include sections of resurfacing and shoulder modifications.

There are two existing Pace bus routes that use the Edens Expressway: routes 620 and 626. Route 620 travels on the Edens Expressway between the Dempster Street and Willow Road interchanges, and services those travelling between the Chicago Transit Authority (CTA) Yellow Line Dempster Station and the Allstate Northbrook Campus at Willow Road and the Tri-State Tollway/Interstate 294 (I-294). Route 626 utilizes the Edens Expressway between the Dempster Street and Dundee Road interchanges. This route provides service between the CTA Yellow Line Dempster Station and various commercial and business centers in Northbrook, Deerfield, Riverwoods, Buffalo Grove, and Lincolnshire. A new Pace route (Route 618) is planned for this corridor, to begin operating in summer 2015. This route will operate between Union Station in downtown Chicago and Lake Cook Road, traveling along the Edens Expressway. All three routes in addition to new and restructured services would benefit from the proposed outside shoulder BOS system. In addition, this improved bus service could offer some motorists a transit option, thus reducing their reliance on their personal vehicles and ultimately, reducing the traffic volume along the corridor.

Phase 2 engineering will finalize design, signage, and pavement marking requirements. Construction costs include rumble strip and pavement marking modifications, and resurfacing. Implementation costs include signage and maintenance (sweeping).

This project will improve the reliability of the current bus services as well as future proposed bus routes through the corridor. Benefits of the proposed project will include improvements to travel time performance, achieve travel time savings, improve air quality, reduce congestion, and utilize existing infrastructure in a cost effective program for the CMAP region.

### How does this project address the GOTO 2040 focus group policies?

- Supports I-94 corridor programs
- Pace has used regionally consistent criteria in support of prioritized transit services.
- The transit services establish seamless connections with other modes.
- Invests in modernization of express transit service providing regional mobility.
- Adopts best practices in new technology and user perception.

## **Pace I-94 Edens Corridor Service & Ridership Data**

### **Current Pace Service:**

Route 620 Yellow Line Dempster – Allstate: Weekday express service operating rush hour only between the CTA Yellow Line Dempster Station and Allstate Northbrook Campus at Willow Road/Sanders. Service operates on I-94 between Dempster and Willow Road.

Route 626 Skokie Valley Limited: Weekday express service operating rush hour only between the CTA Yellow Line Dempster Station, Lake –Cook Office Corridor and Lincolnshire Business Center. Route provides bi-directional service providing inbound morning and evening service from the Buffalo Grove Park & Ride to CTA Dempster Station and outbound morning and evening return service between CTA Dempster station and Lincolnshire.

Planned new Service Summer 2015: Route 618 will operate from Union Station in Chicago to Lake Cook Road Office Corridor supplementing exiting rail service in the early morning rush markets when rail service is not available. Service operates from the Kennedy onto the Edens Expressway between Foster and Lake Cook Road.

### **Future Service Restructuring**

Route 620 Yellow Line Dempster – Allstate: With the introduction of Bus on Shoulder service, Route 620 is planned for restructuring and expansion with additional reverse commute trips to serve the Willow Road Corridor.

Route 626 Restructuring: With the introduction of Bus on Shoulder service, Route 626 is planned for restructuring to improve service to current markets with faster and more direct service. In addition, increased frequencies are planned. This expansion will allow Pace to better serve current reverse markets by operating two variants - one serving the Lake Cook Corridor market and the other serving Buffalo Grove/Lincolnshire - Lake County market. In addition, the restructuring will improve service for the current traditional commute market.

New Service CTA Brown Line – Lake Cook Corridor: Service is planned for implementation with the opening of Bus on Shoulder service. Express reverse service from the CTA Kimball Brown Line Station to the Lake Cook Office Corridor. Service is to capture new commute market for employees living within 0.5 miles of CTA stations as far as Chicago/Franklin with a 5% annual growth rate and a mode split of 20% for new market served. Based on analysis of LEHD potential travel demand.

New Service CTA Jefferson Park Station – Lake Cook Corridor: Service is planned for implementation with the opening of Bus on Shoulder service. Express reverse service from the CTA Blue Line Jefferson Park Station to the Lake Cook Office Corridor. Service is to capture new commute market for employees living within 0.5 miles of CTA stations as far as Grand/Milwaukee with a 5% annual growth rate and a mode split of 20% for new market served. Based on analysis of LEHD potential travel demand.

**Table 1: Existing and Projected Ridership Data**

<b>SERVICE COMPONENT</b>	<b>2014 RIDERSHIP</b>	<b>1<sup>ST</sup> YEAR OF BOS OPERATIONS</b>	<b>2<sup>ND</sup> YEAR OF BOS OPERATIONS</b>
Route 620 Yellow line - Allstate	71	82	86
Route 626 Yellow line – Lake Cook/Lincolnshire	449	520	546
Route 618: Chicago Union Station – Lake Cook (2015)		33	35
Route 620 expansion/restructuring		126	132
Route 626 expansion/restructuring		709	744
New route Brown line Kimball – Lake Cook Corridor		166	174
New route Blue line Jefferson Park – Lake Cook Corridor			105
Current daily corridor ridership (2014)	<b>520</b>		
Estimated daily corridor ridership after BOS implementation		<b>1636</b>	<b>1823</b>

Projected total: New average daily ridership at build out: 1303

## DETAILED ESTIMATE OF COSTS

Item	Description	Unit	Quantity	Unit Price	Total
	<b>Edens Expressway – Bus on Shoulder</b>				
	<b>Engineering</b>				
1	Engineering Phase 1	1	1	159,021	159,021
2	Engineering Phase 2	1	1	1,207,424	1,207,424
	<b>Construction</b>				
1	Resurfacing	1	1	3,800,000	3,800,000
2	Rumble Strip Modifications	1	1	2,200,000	2,200,000
3	Traffic Control and Protection	1	1	340,000	340,000
4	Contingencies	1	1	2,142,000	2,142,000
5	Engineering	1	1	1,392,300	1,392,300
	<b>Implementation</b>				
1	BOS Signage	1	1	800,000	800,000
2	Maintenance (Sweeping)	Years	3	466,648	1,399,944
3	Enforcement	Years	2	208,000	416,000
TOTAL COST OF ITEMS:				\$13,856,689	

ESTIMATES MUST BE BASED UPON QUANTITIES AND UNIT COSTS WHENEVER POSSIBLE.  
LUMP SUM AMOUNTS ARE NOT ACCEPTABLE



# I- 94 Edens Corridor Bus On Shoulder



## Legend

- Proposed BOS Corridor
- R 620/626



Lake Cook to Foster



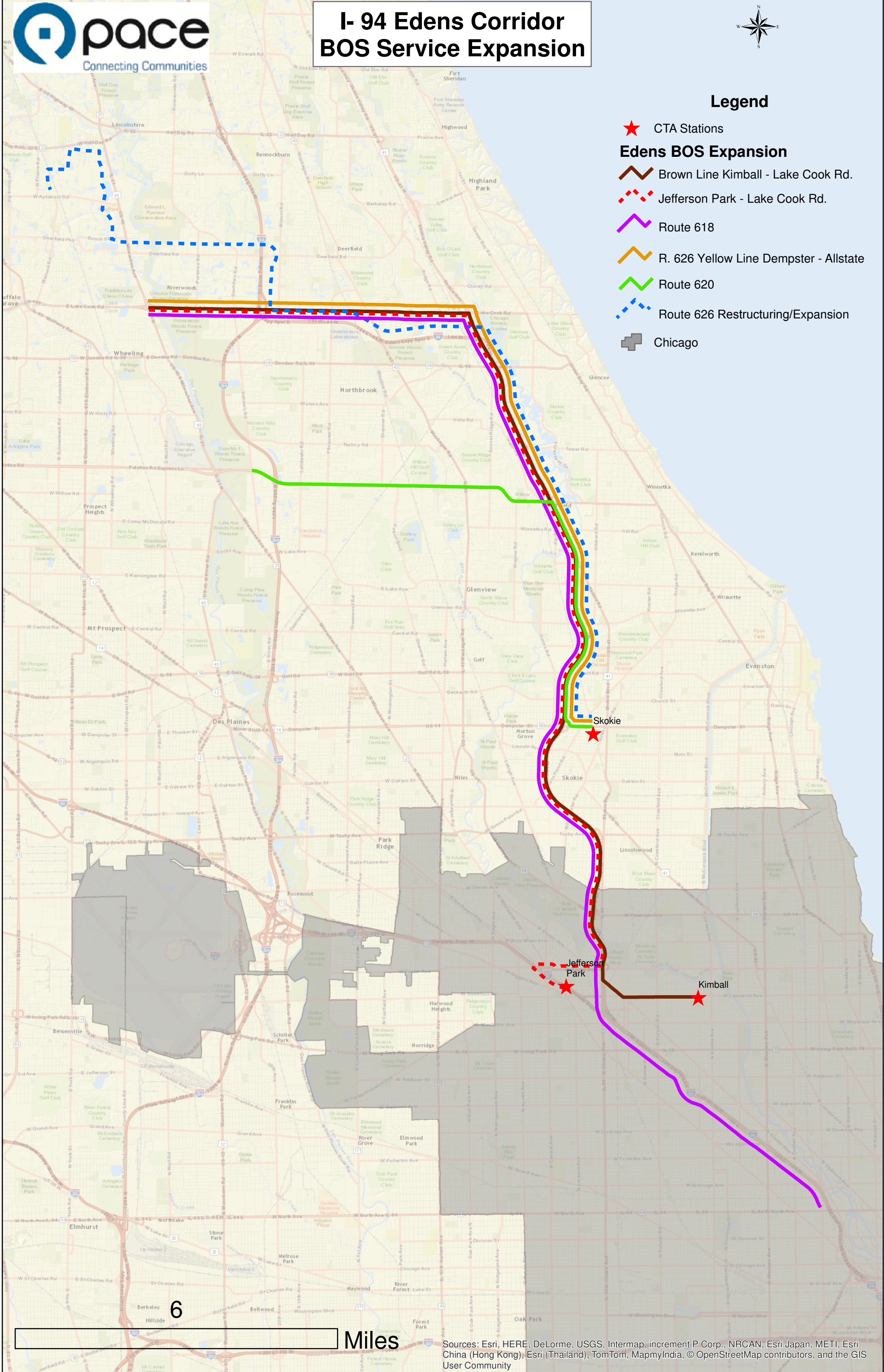


# I- 94 Edens Corridor BOS Service Expansion



## Legend

- ★ CTA Stations
- Edens BOS Expansion**
  - Brown Line Kimball - Lake Cook Rd.
  - Jefferson Park - Lake Cook Rd.
  - Route 618
  - R. 626 Yellow Line Dempster - Allstate
  - Route 620
  - Route 626 Restructuring/Expansion
- Chicago



Miles

Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community



## PROJECT MILESTONE SCHEDULE

Municipality: \_\_\_\_\_  
 Project: I-94 Edens Expressway Bus on Shoulder  
 Scope of Work: Resurfacing, restriping, signage, and rumble strip modification  
 TIP #: \_\_\_\_\_  
 TIP Years (Ph II / Const): \_\_\_\_\_  
 Section #: N/A  
 Last Constr & E3 Cost (date \_\_\_\_\_): \$ \_\_\_\_\_  
 Current Constr & E3 Cost (date: 2/24/2015): \$ 7,070,850

### Contact Information

Municipality	_____
Council/Liaison	_____
Consultant	_____
IDOT	<u>John Fortmann - Region 1 Engineer</u>
	<u>201 West Center Court, Schaumburg, IL 60196</u>

Date Prepared: 2/24/2015

Date Revised: \_\_\_\_\_

### Projected Dates

	Initial	Est.	Kick-Off	Revised/Actual	Notes
1. Project Scoping				8/21/2013	
2. IDOT Phase I Kick-off Meeting				9/24/2013	
3. 1st State/Federal Coordination Meeting				2/26/2014	
4. Categorical Exclusion Concurrence				2/26/2014	
5. Design Variance Concurrence				2/26/2014	
6. Submit Draft Phase I Report (PDR) to IDOT (a)				12/10/2014	
7. Public Hearing/Meeting (or N/A)		N/A			
8. Right-of-Way Kick-off Meeting (or N/A)		N/A			
9. Submit Final Phase I Report (PDR) to IDOT (b)		4/10/2015			4 months after Draft Phase I Report was submitted
10. Submit Phase II Engr. Agreeem't to IDOT (or N/A)		N/A			
<b>11. Phase I Design Approval</b>		6/10/2015			2 months after anticipated submittal date of Final Phase I Report
12. ROW Aquisition Initiation (or N/A) ( c )		N/A			
13. Phase II Engr. Agreement Approval (or N/A)		N/A			
14. Submit Pre-Final Plans and Estimates (d)		8/24/2016			4 months prior to anticipated submittal date of Final Plans, Specs, & Estimates
15. Submit Phase III Engr. Agreement to IDOT		12/24/2016			
16. Submit Final Plans, Specs & Estimates (PS&E) (e)		12/24/2016			3 months prior to anticipated Construction Letting
17. ROW Acquisition Complete		N/A			
<b>18. Construction Letting</b>		3/10/2017			Estimated 2017 Letting Date per IDOT Letting Schedule 2015-2018

### Notes:

- (a) 3 to 6 month review required per complexity and submittal quality
- (b) 1 to 3 month review
- (c ) Minimum 9 to 18 months required from plats to acquisition
- (d) 1 to 4 month review
- (e) 7 to 10 days before Springfield BLR due date

See IDOT Local Roads' **Mechanics of Project Management** "Federal Aid Project Initiation to Completion" Flow Chart for sequence of events and estimated review times.